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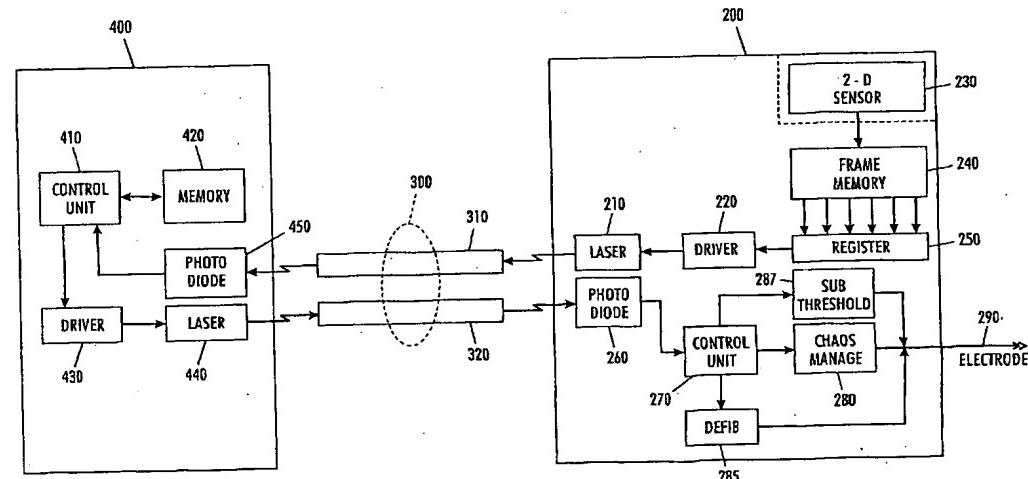
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(54) Title: **FIBRILLATION/TACHYCARDIA MONITORING AND PREVENTIVE SYSTEM AND METHODOLOGY**



(57) Abstract: A cardiac assist device senses conditions of a heart and controls the generation of various electrical stimuli in response to sense conditions of the heart. The cardiac assist device generates a electrical pulse so as to defibrillate a fibrillated heart when the cardiac assist device determines from the sensed conditions a state of fibrillation. The cardiac assist device generates a chaos control electrical signal so as to bring a pre-fibrillated heart condition back into a normal beating condition when the cardiac assist device determines from the sensed conditions a pre-state of fibrillation. Lastly, the cardiac assist device generates an electrical enhancement signal that causes a threshold of pacing cells in the heart to be exceeded in response to a subthreshold stimulus when the cardiac assist device determines from the sensed conditions a subthreshold pacing signal.

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